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I - WARNINGS

1 - Counter-indications

- Do not treat persons with implanted electronic equipment, such as pacemakers and intracardiac defillibrators.
- Avoid electrode placement at the front and side areas of the neck.
- Pregnant women should not be treated during the first trimester (12 weeks).
- Do not use thoracic stimulation on patients with cardiac arrythmia.
- Avoid lower limb stimulation in case of venous thrombosis or servere arterial obstruction (ischemia).
- Avoid abdominal stimulation if you have abdominal or inguinal hernia.

Important!
- Read this manual and the accompanying Practical Guide carefully.

2 - Safety measures

Important points to take into account when using MiTheta 600/ Theta 500 and the Mi system:

- Do not use the stimulator or the Mi-SENSOR system in water or humid environments (saunas, hydrotherapy pools, etc.).
- If pregnant, do not place electrodes directly over the uterus or connect pairs of electrodes across the abdomen. The reason is that, theoretically, the current could affect the foetus's heart (although there are no reports of it being harmful).
- Observe caution if treating patients with sensitivity problems or who are unable to let you know if they feel any discomfort, however slight.
- Observe caution when stimulating in the immediate vicinity of cellular phones that are switched on, since this may affect the output power of the stimulator.
- Do not use the stimulator or Mi-SENSOR system on a patient who is connected to a high-frequency surgical instrument as this could cause skin irritation or burns under the electrodes.
- Do not use the stimulator or Mi-SENSOR system within one metre of short wave or microwave devices as this could alter the currents generated by the stimulator.
- Only use stimulation cables, rechargeable battery units and charger supplied by CefarCompex.
- Always turn off the stimulator or make sure that the intensity for each channel is 0 before disconnecting cables from stimulator or electrodes.
- Never connect the stimulation cables to an external power source due to risk of electric shock.
- Do not use the MiTheta 600/Theta 500 stimulator, or charger if any of the elements are damaged (case, cables, etc.) or if the battery compartment is open. There is a risk of electric shock.
- Unplug the charger immediately if your MiTheta 600/Theta 500 emits a continuous beeping sound or if you notice any abnormal heat, smell, or smoke from either the charger or the stimulator.
- Never recharge the battery in a confined space (carrying case, etc.) as this could cause a fire or electric shock.
- Keep MiTheta 600/Theta 500 and its accessories out of the reach of children.
- Keep the stimulator, battery compartment and charger clean.
- Sudden temperature changes can cause condensation to build up inside the stimulator. To prevent this, allow it to reach ambient temperature before use.
- Do not use your MiTheta 600/Theta 500 while driving or operating machinery.

- Observe caution when using electrotherapy at the same time as the patient is connected to monitoring equipment with body worn electrodes. The stimulation might interfere with the signals to the monitoring equipment.

Precautions when using the electrodes and the motor point pen:

- Only use electrodes and pen supplied by CefarCompex. Other electrodes and pens may have electrical properties that are incompatible with the Mi Theta 600/Theta 500 stimulator.
- Only place electrodes on healthy skin and never on skin lesions of any kind (wounds, swelling, burns, irritation, eczema, etc.).
- Always turn off the stimulator or make sure that the intensity for each channel is 0 before moving or removing the electrodes.
- Do not place the electrodes or the pen in water.
- Do not apply solvents of any kind to the electrodes or pen.
- Do not use electrodes with a surface < 18 cm^2, as there will be a risk of suffering a burn injury. Caution should always be exercised with current densities > 2mA/cm^2
- For optimal results, wash, clean and dry the skin before attaching the electrodes.
- Attach the electrodes so the entire surface is in contact with the skin.
- For hygiene reasons, each patient must have his own set of electrodes. Never use the same electrodes on different patients.
- Some people with very sensitive skin may experience redness under the electrodes after a session. This redness is generally harmless and normally disappears within 10 to 20 minutes. Do not start another stimulation session in the same area, as long as the redness is still visible.
- When the electrodes loose their adhesiveness and do not stick properly to the skin, the stimulation can feel unpleasant. Be sure that the electrodes are in good condition, otherwise they have to be replaced.
- Clean and disinfect the tip of the motor point pen that comes in contact with the skin before each use.

II PRESENTATION

1 - Warranty

This warranty is valid only if accompanied by proof of purchase. Your legal rights are not affected by this warranty.

Your CefarCompex Mi Theta 600/Theta 500 stimulator is guaranteed for a period of 2 years from the date of purchase. The warranty covers the stimulator and the stimulation cables fitted with the Mi-SENSOR system (material and workmanship) but not the battery unit, other cables, or charger. All defects arising from substandard material or workmanship are covered. The warranty does not cover damage resulting from impact, accident, improper use, insufficient protection against damp, immersion in water, or repair work conducted by unauthorized personnel.

2 - Maintenance

- Clean with a soft cloth and an alcohol-based, solvent-free cleaning product. Use only a minimum amount of liquid when cleaning the unit.
- Do not disassemble the stimulator or charger as these all contain high-voltage components that could cause electric shock. This may only be done by persons or repair services authorized by CefarCompex.
- Your stimulator does not require calibration. If your stimulator contains parts that seem worn or defective, please contact your nearest CefarCompex customer service centre regarding an upgrade.
- Medical and health professionals are obliged to service the unit in compliance with relevant national laws and regulations. This involves testing performance and safety parameters at regular intervals.

3 - Storage and transportation conditions

The CefarCompex Mi Theta 600/Theta 500 contains rechargeable batteries and so the storage and transportation conditions must not exceed the following figures:

- Storage and transportation temperature: -20°C to 45°C
- Maximum relative humidity: 75%
- Atmospheric pressure: 700 hPa to 1060 hPa

4 - Usage conditions

Temperature: 0°C to 40°C
Relative humidity: 30% to 75%
Atmospheric pressure: 700 hPa to 1060 hPa.
Do not use in an explosion risk area.

5 - Elimination

Batteries must be disposed in compliance with relevant national regulatory requirements.

Any products bearing the WEEE marking (a crossed-out wheeled bin) must be separated from ordinary household waste and sent to special collection facilities for recycling and recovery.

6 - Standards

CefarCompex Mi Theta 600/Theta 500 is designed for use by health professionals and as such complies with relevant medical standards and regulatory requirements.

To guarantee your safety, CefarCompex Mi Theta 600/Theta 500 has been designed, manufactured, and distributed in compliance with the requirements of the European Directive 93/42/EEC on medical devices.

CefarCompex Mi Theta 600/Theta 500 also complies with the IEC 60601-1 standard on general safety requirements for medical electrical devices, the IEC 60601-1-2 standard on electromagnetic compatibility, and the IEC 60601-2-10 standard on particular safety requirements for nerve and muscle stimulators.

CefarCompex Mi Theta 600/Theta 500 also complies with Directive 2002/96/EEC on waste electrical and electronic equipment (WEEE).

7 - Standardized symbols

Read the operating instructions before use.

CefarCompex Mi Theta 600/Theta 500 is a class II device with internal electric power and type BF applied parts.

Waste electrical and electronic equipment (WEEE) marking according to EN 50419 standard.

CE
1250

In compliance with the requirements of the European Directive 93/42 EEC on medical devices.

8 - Technical specifications

A) General information

Battery 941213: Nickel metal hydride (NiMH) rechargeable battery (4.8 V, 2000 mAh).

Battery chargers: Only battery chargers bearing the following information can be used to recharge the batteries supplied with MiTheta 600/Theta 500 stimulators.

Europe

683010

Type TR1509-06-E-133A03

Input 90-264 VAC /47-64 Hz/0.5 A max.

Output 9 V/1.4 A/15 W

UK

683012

Type TR1509-06-U-133A03

Input 90-264 VAC /47-64 Hz / 0.5 A max.

Output 9 V/1.4 A /15 W

B) Neurostimulation

All electrical specifications are given for an impedance of 500-1000 Ohm per channel.

Channels: Four individually adjustable channels that are electrically isolated from each other and earthed.

Impulse shape: Constant rectangular current with pulse compensation to eliminate any direct current component to prevent residual polarization at skin level.

Maximum pulse intensity: 120 mA

Pulse intensity increments: Manual adjustment of stimulation intensity: 0-999 (energy units) – Minimum increment: 0.5 mA

Pulse width: 30 to 400 microseconds Maximum electrical charge per pulse: 96 microcoulombs (2 x 48 µC, compensated)

Standard pulse ramp-up time: 3 microseconds (20%-80% of maximum current)

Pulse frequency: 1-150 Hz.

C) Information related to electromagnetic compatibility (EMC)

The MiTheta600/Theta 500 is designed to be used in typical domestic or clinical environments and is approved according to the EMC safety standard of EN 60601-1-2.

This device emits very low levels in the radio frequency (RF) interval and is therefore not likely to cause any interference with nearby electronic equipment (radios, computers telephones etc.).

The MiTheta 600/Theta 500 is designed to withstand foreseeable disturbances originating from electrostatic discharges, mains supply magnetic fields or radio frequency transmitters.

Despite this, it is not possible to guarantee that the stimulator is not affected by strong RF (radio frequency) fields emitting from for example mobile phones.

More detailed information can be received upon request by contacting CefarCompex.

III USAGE GUIDELINES

1 - Placement of electrodes

For optimal results, use the electrode positions recommended by CefarCompex. For the placement of electrodes, refer to the electrode placement illustration.

It is crucial to choose the right size of the electrodes and correctly position these on the muscle group you want to stimulate to ensure the efficacy of the treatment. To do this, always use the sizes and positions shown in the pictograms unless otherwise required by medical needs. Where necessary, look for the best possible position by slowly moving the electrode over the muscle until you find the point that will produce the best contraction (the motorpoint) or the most comfort for the patient.

These recommended positions are also the optimal positions for the Mi-SENSOR system, and as such should be followed closely.

CefarCompex disclaims all responsibility for consequences arising from electrodes placed in other positions.

2 - Body position

Refer to the pictures of the electrode placement to determine the stimulation position for your patient depending on the placement of the electrodes and the chosen program.

This position will vary depending on the position of the electrodes, the muscle group you wish to stimulate, and the program you are using.

For programmes that do not involve muscle contractions (Pain relief programmes, for example), make sure that the patient is as comfortable as possible.

3 - Adjusting stimulation energies

The number of fibres recruited in a stimulated muscle depends on the stimulation energies used. It is therefore extremely important to use maximum stimulation energies where possible in order to recruit the maximum number of fibres. If the stimulation energy is too low, too few fibres will be obliged to work and the improvement in muscle quality will be negligible.

It takes at least 3 sessions to reach this maximum energy level. The first few sessions serve to introduce progressive increments in stimulation energy (and muscle contraction) levels and to help the patient to become used to the method.

After an initial warm-up period, which should produce very clear muscle twitches, increase the stimulation energies gradually, contraction by contraction, for the duration of the session.

4 - Level progression

Generally speaking, it is not advisable to try to reach maximum stimulation levels too quickly. The different levels in each stimulation programme are designed to reeducate the muscle gradually.
We recommend you to prioritize the stimulation energies at each level to recruit as many fibres as possible, before moving on to the next level. Also seek to progressively increase energy levels from session to session.

For maintenance purposes, it is a good idea to hold one session per week with the energy level you used in the previous cycle.

IV Mi TECHNOLOGY

NOTE:
Mi Theta 600: Two Mi-sensors are included in the kit and gives you the possibility to fully use the Mi-technology with Mi-ACTION, Mi-RANGE, Mi-TENS and Mi-SCAN .
Theta 500: This device is Mi-Ready. You can make an optional purchase of maximum one sensor cable, and take the advantage of the Mi-Technology with Mi-RANGE , Mi-TENS and Mi-SCAN .

1 - Practical guidelines for using the Mi system

To access the Mi functions, make sure that the stimulation cable fitted with the Mi-SENSOR is connected to the stimulator **before** this is turned on.

Do not connect the Mi-SENSOR cable if the stimulator is already on.

The Mi-SENSOR system may not work properly if restrained or subject to pressure in any way.

The Mi-SENSOR must be connected to an adhesive electrode at all times during a stimulation session.

Mi-SENSOR

This is a small sensor that links the stimulator to the electrodes. It performs a key function in that it measures certain physiological characteristics of the muscle to be stimulated and transfers this data to the stimulator, which, in turn, analyses the data and adapts its parameters accordingly. This tailoring of each programme to the changing condition of the muscle clearly enhances both patient comfort and therapeutic efficacy.

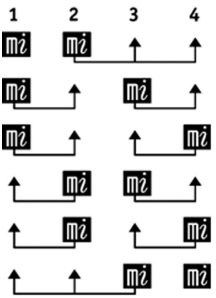
Mi-SCAN

Just before beginning a stimulation session, the Mi-SCAN analyses the excitability of the muscle to be stimulated. The Mi-SCAN determines the chronaxy of the muscle in approximately 12 seconds and sends this data to the stimulator so that it can adapt the pulse width (duration) accordingly. Adapting the pulse width to the chronaxy of the muscle to be stimulated allows the same muscle response to be achieved with less energy.

NOTE: The Mi-SCAN function is enabled only when a cable fitted with the Mi-SENSOR system is connected to the stimulator. Maximum one sensor can be used for the THETA 500.

As many as 2 different chronaxy measurements – corresponding to 2 different muscle groups – can be taken per session. The number of measurements depends on how many sensors are connected to the stimulator.

Each channel that is connected to a standard cable receives the same data as a channel connected to a Mi-SENSOR cable (see below).



Before a programme is executed, the sensor scans the muscle briefly. During this time, a horizontal bar will move up and down the figure to the left on the screen.

It is essential that the patient remains completely still and relaxed while these measurements are being taken. The Mi-SENSOR system is very sensitive and the slightest contraction or movement could interfere with its results.

Note that certain people might feel an unpleasant tingling sensation during the test.

Once the test is complete, a symbol will appear ✓ on the screen indicating that the programme can be started.

Mi-ACTION

NOTE: Only available for MiTheta 600.

Mi-ACTION is a work mode in which the patient triggers an electrically induced stimulation by voluntarily contracting one of his muscles. The stimulation contraction is therefore controlled by the patient.

⚠

For a patient to fully benefit from the Mi-ACTION training mode, his muscles must be well developed. Insufficiently developed muscles may, in some case, prevent the triggering of the electrically induced contraction.

Programmes run in Mi-ACTION mode offer a number of distinct benefits:

- They require the active participation of patients and encourage them to become fully involved in their treatment.
- They allow patients to control their contractions, allowing them to feel more at ease with the system.
- They optimize performance by combining voluntary and electrical stimulation exercises, which results in a more intensive recruitment of muscle fibres.
- They help to retone the body and facilitate motor reeducation in patients with neuromuscular disorders.
- They integrate the stimulation of stabilising muscles into a broader functional exercise plan.

The Mi-ACTION mode is only available for certain programmes.

Programmes run in Mi-ACTION mode are always preceded by a Mi-SCAN test.

The Mi-ACTION mode is enabled only during work sequences (not during warm-up and relaxation sequences).

The first muscle contraction in the work sequence is triggered automatically. This is followed by an active rest phase consisting of a series of muscle twitches.

A new contraction can only be triggered after a minimum rest time, which varies from programme to programme. The stimulator emits a signal to notify the patient when he can trigger another contraction.

This signal can take different forms:

- A series of short beeps with increasing frequency: voluntary contraction possible.
- A continuous beep: ideal moment for voluntary contraction.
- A series of short beeps with decreasing frequency: voluntary contraction still possible and work rate still satisfactory.
- If no voluntary contractions are detected within a certain time (this varies from programme to programme), the stimulator will automatically enter Standby mode.

NOTE: The Mi-SENSOR system needs to record the muscle twitches in the active rest phase in order to offer optimal results. If the twitches are not sufficiently intense during this phase, the stimulator will emit a series of beeps and a + sign will appear on the screen. Note that these muscle twitches will only occur if the muscles are sufficiently relaxed. Patients should therefore be encouraged to adopt a position in which they will be as relaxed as possible at the end of each contraction phase.

Mi-TENS

The Mi-TENS function can be used to considerably reduce the number of unwanted muscular contractions, enhancing both user comfort and treatment efficacy.

It is available only for the TENS, Modulated TENS, Epicondylitis and Arthralgia programmes. When enabled, the Mi-TENS function controls stimulation energies by keeping them at an effective level and reducing the number of unwanted contractions.

It works by performing a series of short measurement tests (lasting 2 to 3 seconds) at regular intervals throughout the entire programme.

A test is automatically launched whenever the stimulation energies are increased. The subject must remain perfectly still during the test to ensure optimal results.

Depending on the results, the stimulator may automatically reduce the stimulation energies slightly.

NOTE: It is important to ensure that patients adopt the most comfortable position possible during stimulation, remain still, and do not contract any of the muscles in the stimulation area.

Mi-RANGE

The Mi-RANGE function is used in programmes which depend on the triggering of vigorous muscle twitches to indicate the optimal stimulation energy range.

It is therefore only available in some of the programmes that use low stimulation frequencies (less than 10 Hz).

When the Mi-RANGE function is enabled, the stimulator will check whether you are working in the optimal energy range. If the level is too low, it will prompt you to increase the level by displaying a series of + signs on the screen.

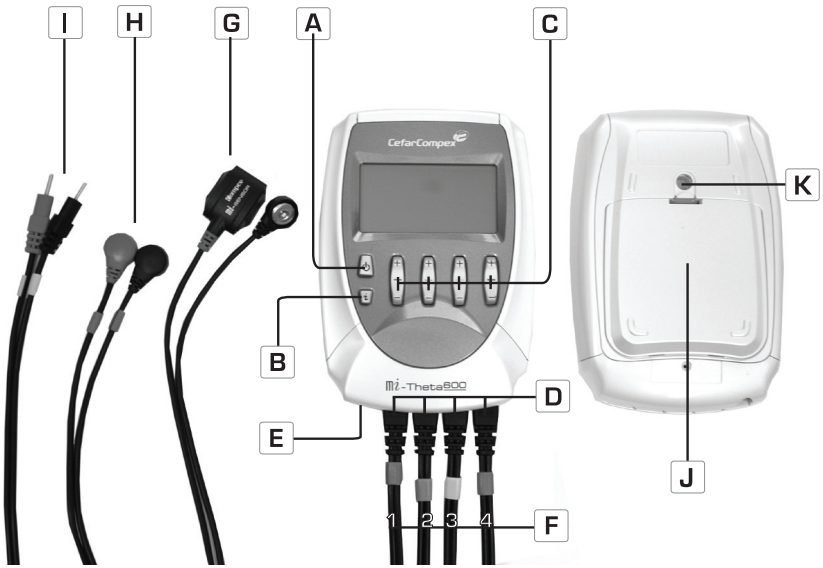
Once the stimulator has detected the ideal energy range, a square bracket will appear to the right of the bar graph corresponding to the stimulation channel the Mi-SENSOR is connected to. The figures enclosed by this bracket indicate the range you must work in, in order to achieve optimal results.

If you set the energy level below this range, the stimulator will prompt you to increase it by flashing a series of + signs on the screen.

V USING THE STIMULATOR

You are strongly advised to read the counter-indications and safety measures described at the beginning of this manual (chapter 1 “Warnings”) prior to using your stimulator.

1 - Description of stimulator



A - On/Off button
B - i button. This is used to:
- Increase stimulation energies in several channels simultaneously.
- Access the Top 5 menu (showing 5 most recently used programs.
- Access the contraction info menu (showing number of contractions and total contraction time).
- Access parameter info menu for personalised programmes.

C - +/- buttons for 4 stimulation channels
D - Sockets for 4 stimulation cables
E - Battery charger socket
F - Stimulation cables Channel 1 = blue Channel 2 = green Channel 3 = yellow Channel 4 = red
G - Stimulation cables fitted with Mi-SENSOR system
H - Stimulation cable fitted with snap connector
I - Stimulation cable fitted with pin connector
J - Rechargeable battery compartment
K - Belt clip socket

2 - Connections

A) Connecting the cables

The stimulator cables plug into the 4 sockets on the base of the device. All 4 cables can be connected simultaneously. Both the +/- buttons and the cables are colour-coded to simplify use and facilitate identification of the different channels.

The kit includes four snap-connector cables and four 2,1 mm pin-connector cables.

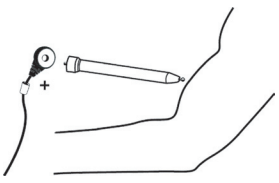
To connect a snap-connector cable to an electrode, simply insert the snap end of the cable into the electrode eyelet and twist it a quarter turn.

In addition to these standard cables, Mi Theta 600 comes with 2 special cables fitted with the Mi-SENSOR. These cables can be connected to any of the 4 sockets for the stimulation channels, on the base of the stimulator. Just like the standard cables, they must also be connected to 2 electrodes.

NOTE: For Theta 500 you can make an optional purchase of maximum one sensor cable.

B) Connecting the motor point pen

Never use the motor point pen for any purposes other than locating the motor point of the muscle. Follow the instructions in this manual. Clean and disinfect the tip of the motor point pen that comes in contact with the skin before each use. Apply a small amount of gel to the skin when looking for the motor point to enhance patient comfort.



Refer to the picture above to see how to connect the pen.

Connect the tip of the motor point (preferably to the red connector). The other snap connector must be connected to an electrode already on the muscle to be stimulated.

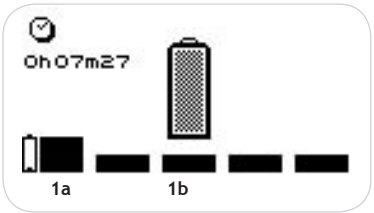
C) Charging

The Mi Theta 600/Theta 500 is a portable muscle stimulator powered by a rechargeable battery unit.

Recharging

To recharge the Mi Theta 600/Theta 500, first disconnect the electrode cables from the device, then plug the charger to a wall socket and finally connect the stimulator to the charger.

The charge menu illustrated below appears automatically.



1a: The stimulator has been charged for 7 minutes and 27 seconds (a full charge may take 2-2,5 hours with the rapid charger delivered with your device).

1b: Charging is in progress. When charging is completed, total charge duration flashes and the battery symbol is completely full. The stimulator switches off automatically as soon as you disconnect the charger.

3 - Preliminary settings

A) Language, contrast, volume

When you start the stimulator for the first time, you will need to choose the interface language you wish to use from the options screen. See below for instructions on how to proceed. There are a range of settings that you can adjust to suit your needs (interface language, display contrast, backlighting, volume). To change any of these settings, bring up the options screen by holding the On/Off button on the front of the stimulator for a few seconds.

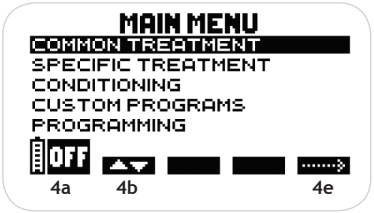
3b: Use the channel 1 +/- button to choose the language you wish to use.
3c: Use the channel 2 +/- button to adjust the contrast of the screen.
3d: Use the channel 3 +/- button to adjust the volume.
3e: Use the channel 4 +/- button to adjust the backlighting.
On: Backlighting always on
Off: Backlighting always off
Auto: Backlighting activated whenever a button is pressed.
3a: Use the On/Off button to confirm and save your choices. The settings will be applied immediately.

4 - Neurostimulation programmes

To start the stimulator, press the On/Off button. To choose a programme, you must first choose a type of treatment and a programme category.

NOTE: There is a table summarizing the different programmes and their functions at the end of this manual.

A) Choosing a type of treatment



4a: Press the On/Off button to turn off the unit.
4b: Use the channel 1 +/buttons to choose another type of treatment (for ex Specific Treatment or Conditioning).
4e: Press the channel 4 +/- button to confirm your choice and access the programme category selection screen.

Press the i button to access the Top 5 menu.

B) Choosing a programme category

5a: Press the On/Off button to return to the previous screen.
5b: Use the channel 1 +/- button to choose a category.
5e: Press the channel 4 +/- button to confirm your choice and access the programme selection screen.

Press the i button to access the Top 5 menu.

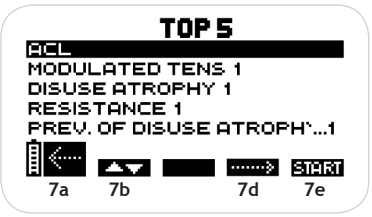
C) Choosing a programme

NOTE: Consult our Practical Guide for help in choosing a programme. Once you choose a category, the screen will display a list of available programmes.

6a: Press the On/Off button to return to the previous screen.
6b: Use the channel 1 +/- button to choose the programme you want.
6e: Press the channel 4 +/- button to confirm your choice. Certain programmes start right away while others allow you to specify additional options.

TOP 5

To access the Top 5 menu, press the i button before selecting a programme. The menu can be accessed from the type of treatment screen (Figure 4), the programme category screen (Figure 5), or the programme list screen (Figure 6).



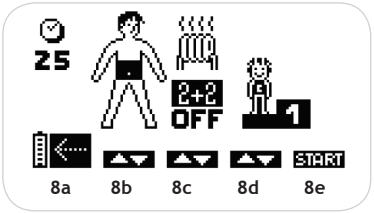
7a: Press the On/Off button to return to the previous screen.
7b: Use the channel 1 +/- button to choose the programme you want.
7d: Use the channel 3 +/- button to personalize the programme.
7e: Press the channel 4 +/- button to start the programme.

D) Personalizing a programme

Not all programmes have an option screen.

Mi-SENSOR not connected

In certain programmes, you will need to choose the muscle group you want to stimulate when there are no Mi-SENSOR cables connected to the stimulator. The target area is shown in black on the figure above channel 1.

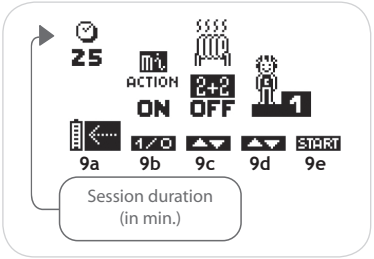


8a: Press the On/Off button to return to the previous screen.
8b: Use the channel 1 +/- button to choose the desired treatment area. You can choose among 7 areas.
8c: Press the channel 2 +/- button to delete the warming-up sequence and to choose if you want to combine with any of the 2+2 programs on channel 3 and 4.
8d: Use the channel 3 +/- button to choose the programme difficulty level.
8e: Use the channel 4 +/- button to confirm your choices and launch the programme.

Mi-SENSOR connected

The stimulator will automatically select the muscle group to be stimulated when a Mi-SENSOR cable is connected to the unit.

Reminder: The Mi-SCAN function will activate automatically in programmes that accommodate this function when at least one Mi-SENSOR cable is connected to the stimulator.



9a: Press the On/Off button to return to the previous screen.
9b: NOTE: Only available in MiTheta 600. Use the channel 1 +/- button to enable the Mi-ACTION function. When the function is enabled, the screen will display the word ON or OFF. When in ON mode, it is the patient who triggers the stimulation. Reminder: Not all motor nerve stimulation programmes use the Mi-ACTION function. If the Mi-ACTION function is not available, there will be no symbol above channel 1.
9c: Press the channel 2 + button to delete the warming-up sequence. Press the channel 2 - button to choose if you want to combine with any of the 2+2 programs on channel 3 and 4.
NOTE: When the 2+2 function is enabled, the Mi-ACTION cannot be activated and the corresponding symbol will disappear automatically from the screen.

Use the channel 2 + button to delete the default warm-up period.

9d: Use the channel 3 +/- button to choose the programme difficulty level.
9e: Use the channel 4 +/- button to confirm your choices and launch the programme.

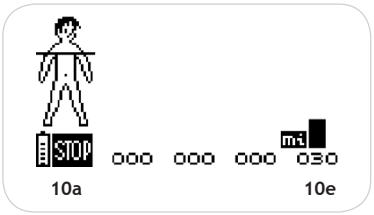
Preliminary Mi-SCAN test

This test is launched only if a cable fitted with the Mi-SENSOR system is already connected to the stimulator when this is turned on!

It is essential that the patient remains completely still and relaxed during the entire test.

If the Mi-SENSOR cable is connected, the test will begin as soon as you choose and personalise your programme.

NOTE: The test is not launched if you choose a programme that does not require the pre-selection of a muscle group.



10e: In this example the mi logo above channel 4 indicates that the mi-SENSOR cable is connected to the stimulator on channel 4. The figures in channel 4 will automatically change during the test as the sensor record different measurements.

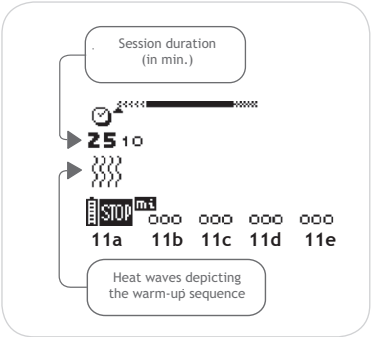
NOTE:
When several sensors are connected simultaneously, the mi-SCAN test is performed progressively, one mi-SENSOR connected channel after the other. The channel being scanned is easily identified by its changing numbers and the mi logo above the channel. The 4 +/- buttons will be disabled for the duration of the test.

10a: Press the On/Off button to interrupt the test at any moment. To relaunch the test from the start, press any of the 4 +/buttons.
Press the On/Off button a second time to return to the list of programmes.

Once the test is complete, you will automatically be taken to the default programme start screen and prompted to increase the stimulation energies.

Adjusting stimulation energies

When you start a programme, you will be prompted to increase the stimulation energies. This is the key to the success of any treatment.



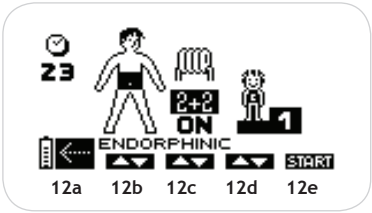
11a: Press the On/Off button to return to the previous screen.
11 b c d e: The unit will beep and the symbols for the 4 channels will alternate between + and 000. The energy level for the 4 channels is at 0. To start the programme, you will need to increase the energy levels in the channels you are going to use. To do this, use the corresponding + buttons.

NOTE: If you want to increase the energy levels in all 4 channels simultaneously, press the i button. Press it twice to increase the levels in the first 3 channels, and 3 times to increase the levels in the first 2 channels. Interdependent channels will be highlighted in white against a black background.

E) Choosing the 2+2 function

You now have the possibility to choose the 2+2 function which means that you can choose one program for the channel 1 and 2, then select one program from the 2+2 program list for channel 3 and 4.

This means that you could treat two different body parts at the same time or combine two different programs on the same body part.



12a: Press the On/Off button to return to the previous screen.
12b: Use the channel 1 +/- button to choose the desired treatment area, You can choose from 7 areas.
12c: Press the channel 2 + to delete the warming up sequence, by pressing the channel 2 – the 2+2 mode is selected and the first program in the list is displayed. Press the channel 2 – again in order to display the next program in the list.
12d: Use the channel 3 +/- button to choose the program difficulty level
12e: Use the channel 4 +/- button to confirm your choices and launch the program.
NOTE: The timer for ch 1+2 will control the total session time. This means that the total time for ch 3+4 could not exceed the session time for ch 1+2.

NOTE: The program for ch 3+4 is always in one phase

NOTE: If a preset program uses more than two channels, it's not avalable for the 2+2 mode.

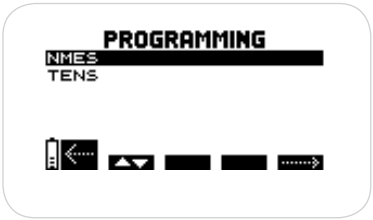
The horizontal bars on top of the display shows the total duration and different phases of the programs. Left bar for P1 and right bar for P2

P1 shows the program chosen for channel 1 and 2
P2 shows the program chosen for channel 3 and 4

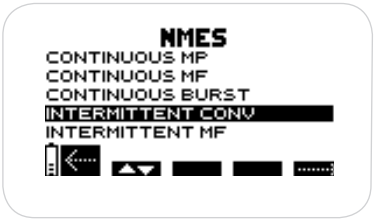
F) Programming mode

In the programming mode you could create a custom program and select your own parameters. Then name your program and save it in the custom programs category.

Go to the programming category.

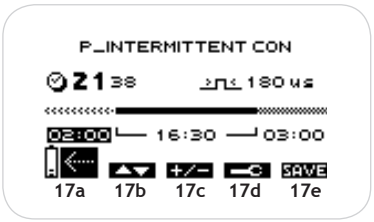


Select NMES or TENS



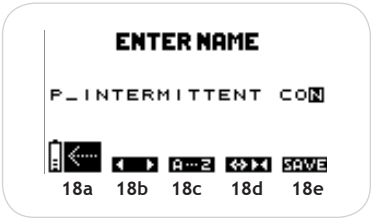
Select the stimulation form

In order to personalize the parameters:



17a: Press the On/Off button to return to the previous screen
17b: Use the channel 1 +/- button to move the cursor between the different settings
17c: Use the channel 2 +/- button to increase or decrease the setting values
17d: Use the channel 3 +/- button to show further parameters possible to adjust
17e: Use the channel 4 +/- button to save the program

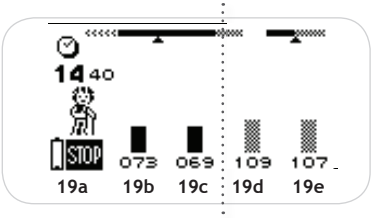
Saving programme
18a: Press the On/Off button to return to the previous screen



18b: Use the channel 1 +/- button to move the cursor in the program name
18c: Use the channel 2 +/- button to write letters and figures
18d: Use the channel 3 +/- button to maximize or minimize the space
18e: Use the channel 4 +/- button to save the program

NOTE: You can save maximum 10 custom programs.
NOTE: Also the custom programs are possible to combine with a program from the 2+2 list by adding and selecting the 2+2 option. When you save this program will consist of one program on channel 1+2 (P1) and one program for channel 3+4 (P2) (Please see section “Choosing the 2+2 function”.)

G) Stimulation mode



19 b c d e: The different energies reached during the contraction phase are shown by a series of black bar graphs. Active rest phase energies are shown by hatched bar graphs.

NOTE: Active rest phase stimulation energies are automatically set at 50% of contraction intensities but can be modified during the rest phase. Once modified, they will be totally independent of the contraction intensities.

Pause mode
19a: Press the On/Off button to interrupt the programme momentarily. To restart it, simply press the channel 4 +/- button (19e). The session will resume at 80% of the energy levels that were being used prior to the interruption.
NOTE: If your MiTheta 600/Theta 500 emits a beeping sound and the + symbols under the active channels begin to flash, the stimulator is suggesting you to increase the level of the stimulation energies. If you are working at the patient’s maximum tolerance level, simply ignore this message.

Contraction information
When working with a muscle contraction programme, you can access the contraction info screen at any time to consult the number of contractions and total contraction time.

To access the screen, simply hold down the i button.

Skip function
***NOTE**: The Skip function is not available for THETA 500.*

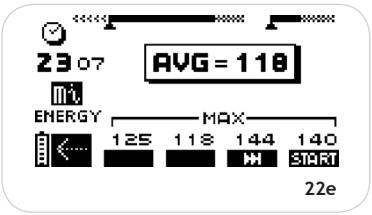
In certain programmes, the skip function allows you to end the current programme phase and move on to the next one. For skip function to work, the unit must be in Pause mode.

21a: Press the On/Off button to return to the list of programmes in the category you are working with.
21d: Use the channel 3 +/- button to skip a particular sequence of a programme. When you do this, the unit will beep and the cursor under the progress bar will move to the beginning of the next sequence.
21e: Use the channel 4 +/- button to resume the programme at the chosen sequence.

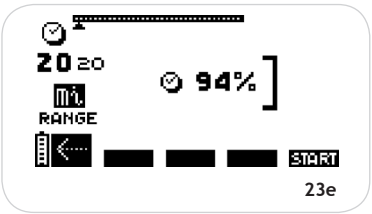
NOTE: The skip function is not available for all programmes. It should also be noted that this function can reduce the effectiveness of a programme if used to shorten the work sequence excessively.

Statistics
***NOTE**: The Statistics function is not available for THETA 500.*

The Mi Theta 600/Theta 500 stimulator includes a statistics menu containing important programme information that can be consulted in real time. To access the statistics screen, you must place the stimulator in pause mode or wait for the programme to end.



In neuromuscular electrostimulation (NMES) programmes, MAX indicates the maximum stimulation energy level reached per channel during the contraction phase. AVG indicates the average stimulation energy level used by the different channels during the contraction phase.

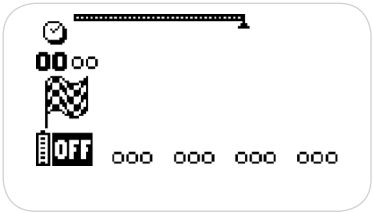


In low frequency programmes, the Mi-RANGE function figure enclosed by a single square bracket shows what percentage of stimulation time was spent in the optimal energy range.

22-23e: Press the channel 4 +/- button to resume the programme at the point where it was interrupted.

End of programme

Different statistics are displayed depending on the programmes and options used (see Figures 22 and 23). It should be noted, however, that statistics are not available for all programmes.



At the end of each session, a small flag will be displayed on the screen and a short melody will be played.

NOTE: Press the i button to access the contraction info screen.

To turn off the stimulator, press the ON/OFF button.

5 - Battery status and recharging

Never recharge the stimulator without first disconnecting the stimulation cables.

Never recharge the battery with a charger other than that supplied by CefarCompex.

The Mi Theta 600/Theta 500 is powered by a rechargeable battery unit. The battery's duration varies according to the programmes and stimulation energies used. We strongly recommend you to fully charge the battery before using it for the first time as this will extend battery duration and life time. If you do not use your stimulator for long periods of time, remember to recharge the battery regularly.

A) Battery status

The status of the battery is indicated by a battery icon on the screen. If the battery icon contains just two lines, this means that power is running low. Stop the session and recharge the unit.

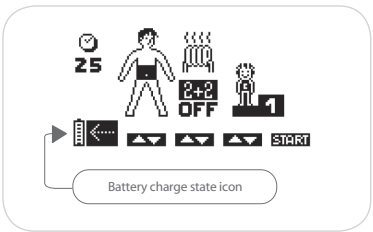
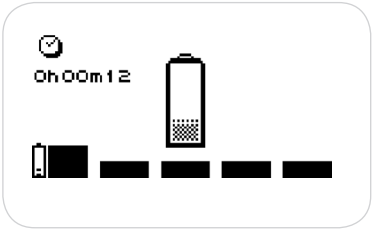


fig. 25

If the START symbol normally displayed above the channel 4 +/- button is not visible and the battery icon is flashing, this means that the battery is completely discharged. The stimulator can no longer be used. Recharge immediately.

B) Recharging

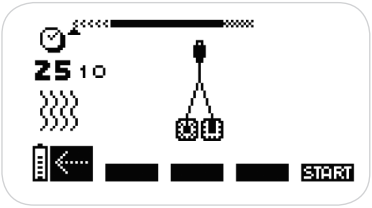
Remove all stimulation cables from the stimulator before recharging it. Connect the charger to the mains and then connect the stimulator to the charger. The charge menu shown below will automatically appear on the screen.



The duration of the recharging operation is displayed on the screen. The charger supplied with the stimulator fully recharges the stimulator within 2-2,5 hours.

The battery icon is animated while the battery is recharging. When fully charged, the icon will be full and the total time taken to recharge the battery will flash on the screen. Simply disconnect the charger and the Mi Theta 600/ Theta 500 will turn off automatically.

6 - Troubleshooting



Electrode error

The Mi Theta 600/Theta 500 will beep and alternately display a pair of electrodes and an arrow pointing to the channel where the problem was detected. In the example above, the stimulator has detected an error in channel 2.

The electrode error message can mean that:

- there are no electrodes connected to this channel,
- the electrodes are old, worn, and/ or the contact is poor: try using new electrodes,
- the electrode cable is faulty: try connecting it to another channel. If the problem persists, replace the cable.

If for any reason yor device seems to present a malfunction other than those presented above, please contact Cefar-Compex customer service.

VI LIST OF PROGRAMS - MiTheta 600

COMMON TREATMENT					
PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-TENS	Mi-RANGE	Optional 2+2
REHABILITATION					
DISUSE ATROPHY	x	x	-	-	x
PREV. OF DISUSE ATROPHY	x	x	-	-	x
REINFORCEMENT	x	x	-	-	x
NEURO REHAB Slow start	x	-	-	-	x
BACK-TRUNK/STABILIZATION	x	x	-	-	x
ATROPHY (Mod Freq)	x	x	-	-	x
FORCE (Mod Freq)	x	x	-	-	x
INCREASE CIRCULATION	x	-	-	-	x
MUSCLE LESION	x	-	-	-	x
MOTOR POINT	-	-	-	-	-
SPECIFIC REHABILITATION					
HIP PROSTHESIS	x	-	-	-	x
PATELLAR SYNDROME	x	-	-	-	x
HEMIPLEGIA	x	-	-	-	x
ROTATOR CUFF	x	x	-	-	x
ACL	x	-	-	-	-
CARDIO TRAINING	x	-	-	-	x
PAIN RELIEF					
TENS 100Hz	-	-	x	-	x
TENS 80Hz	-	-	-	-	x
FREQ MODULATED TENS	-	-	x	-	x
ENDORPHINIC	x	-	-	x	x
DECONTRACTION	x	-	-	x	x
PW MODULATED TENS	-	-	-	-	x
BURST TENS	-	-	-	-	x
MIXED TENS	-	-	-	-	x
MUSCLE PAIN	-	-	-	-	x
JOINT PAIN	-	-	-	-	x
FRACTURE PAIN	-	-	-	-	x

VI LIST OF PROGRAMS - MiTheta 600

PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-TENS	Mi-RANGE	Optional 2+2
SPECIFIC PAIN RELIEF					
KNEE PAIN	-	-	-	-	x
TRAPEZIUS PAIN	-	-	-	-	x
SHOULDER PAIN	-	-	-	-	x
CERVICAL PAIN LO	x	-	-	x	x
CERVICAL PAIN HI	-	-	-	-	x
THORACIC BACK PAIN	x	-	-	x	x
LOW BACK PAIN	x	-	-	x	x
LOW BACK MUSCLE PAIN	-	-	-	-	x
LUMBOSCIATICA	x	-	-	x	x
LUMBAGO	x	-	-	x	x
EPICONDYLITIS	-	-	x	-	x
TORTICOLLIS	x	-	-	x	x
ARTHRALGIA	-	-	x	-	x
VASCULAR					
HEAVY LEGS	x	-	-	x	x
VENOUS INSUFFICIENCY 1	x	-	-	x	x
VENOUS INSUFFICIENCY 2	x	-	-	-	-
ARTERIAL INSUFFICIENCY 1	x	-	-	-	x
ARTERIAL INSUFFICIENCY 2	x	-	-	-	x
CRAMP PREVENTION	x	-	-	x	x
CAPILLARIZATION	x	-	-	x	x

VI LIST OF PROGRAMS - MiTheta 600

SPECIFIC TREATMENT					
PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-TENS	Mi-RANGE	**Optional 2+2**
AGONIST/ANTAGONIST					
ATROPHY 1	x	-	-	-	-
ATROPHY 2	x	-	-	-	-
REINFORCEMENT 1	x	-	-	-	-
REINFORCEMENT 2	x	-	-	-	-
SPASTICITY					
HEMIPLEGIC FOOT	x	-	-	-	-
SPASTICITY	x	-	-	-	x
SHOULDER SUBLUXATION	x	-	-	-	x
HAEMOPHILIA					
H DISUSE ATROPHY	x	-	-	-	x
H REINFORCEMENT	x	-	-	-	x
AESTHETIC					
TONING	x	x	-	-	x
FIRMING	x	x	-	-	x
SHAPING	x	x	-	-	x
REFINEMENT	x	x	-	-	x
ABS	x	-	-	-	-
BUTTOCKS	x	-	-	-	-
ELASTICITY	x	-	-	x	x

VI LIST OF PROGRAMS - MiTheta 600

CONDITIONING					
PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-TENS	Mi-RANGE	**Optional 2+2**
SPORT					
POTENTIATION	x	-	-	-	x
ENDURANCE	x	-	-	-	x
RESISTANCE	x	x	-	-	x
STRENGTH	x	x	-	-	x
EXPLOSIVE STRENGTH	x	x	-	-	x
HYPERTROPHY	x	x	-	-	x
REGENERATION	x	x	-	-	x
LOW BACK REINFORCEMENT	x	x	-	-	x
CORE STABILIZATION	x	x	-	-	x
ACTIVE RECOVERY	x	-	-	x	x
RECOVERY PLUS	x	-	-	x	x
FITNESS					
MUSCLE BUILDING	x	x	-	-	x
MUSCLE DEFINITION	x	x	-	-	x
POWER	x	x	-	-	x
MASSAGE					
TONING MASSAGE	x	-	-	x	x
RELAXING MASSAGE	x	-	-	x	x
REVIVING MASSAGE	x	-	-	x	x
ANTI-STRESS MASSAGE	x	-	-	x	x
UNDULATED MASSAGE 1	x	-	-	x	-
UNDULATED MASSAGE 2	x	-	-	x	-

VI LIST OF PROGRAMS - MiTheta 600

PROGRAMMING					
CUSTOM PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-TENS	Mi-RANGE	**Optional 2+2**
NMES					
CONT. CONVENTIONAL	-	-	-	-	x
CONT. MODULATED PW	-	-	-	-	x
CONT. MODULATED FREQ	-	-	-	-	x
BURST	-	-	-	-	x
INTERMITT. CONVENTIONAL	-	-	-	-	x
INTERMITT. MODULATED FREQ	-	-	-	-	x
TENS					
CONVENTIONAL	-	-	-	-	x
BURST	-	-	-	-	x
MIXED FREQUENCY	-	-	-	-	x
MODULATED PW	-	-	-	-	x
MODULATED FREQUENCY	-	-	-	-	x
2+2 PROGRAMS					
FREQ MODULATED TENS	-	-	-	-	-
PW MODULATED TENS	-	-	-	-	-
BURST TENS	-	-	-	-	-
ENDORPHINIC	-	-	-	-	-
REINFORCEMENT (SMALLER MUSCLE GROUPS)	-	-	-	-	-
REINFORCEMENT (LARGER MUSCLE GROUPS)	-	-	-	-	-
DISUSE ATROPHY (SMALLER MUSCLE GROUPS)	-	-	-	-	-
DISUSE ATROPHY (LARGER MUSCLE GROUPS)	-	-	-	-	-

VI LIST OF PROGRAMS - Theta 500

COMMON TREATMENT				
PROGRAMS	Mi-SCAN	Mi-TENS	Mi-RANGE	**Optional 2+2**
REHABILITATION				
DISUSE ATROPHY	x	-	-	x
PREV. OF DISUSE ATROPHY	x	-	-	x
REINFORCEMENT	x	-	-	x
NEURO REHAB Slow start	x	-	-	x
BACK-TRUNK/STABILIZATION	x	-	-	x
ATROPHY (Mod Freq)	x	-	-	x
FORCE (Mod Freq)	x	-	-	x
INCREASE CIRCULATION	x	-	-	x
MUSCLE LESION	x	-	-	x
MOTOR POINT	-	-	-	-
SPECIFIC REHABILITATION				
HIP PROSTHESIS	x	-	-	x
PATELLAR SYNDROME	x	-	-	x
HEMIPLEGIA	x	-	-	x
PAIN RELIEF				
TENS 100Hz	-	x	-	x
TENS 80Hz	-	-	-	x
FREQ MODULATED TENS	-	x	-	x
ENDORPHINIC	x	-	x	x
DECONTRACTION	x	-	x	x
PW MODULATED TENS	-	-	-	x
BURST TENS	-	-	-	x
MIXED TENS	-	-	-	x
MUSCLE PAIN	-	-	-	x
JOINT PAIN	-	-	-	x
FRACTURE PAIN	-	-	-	x

VI LIST OF PROGRAMS - Theta 500

PROGRAMS	Mi-SCAN	Mi-TENS	Mi-RANGE	Optional 2+2
VASCULAR				
VENOUS INSUFFICIENCY 1	x	-	x	x
VENOUS INSUFFICIENCY 2	x	-	-	-
ARTERIAL INSUFFICIENCY 1	x	-	-	x
ARTERIAL INSUFFICIENCY 2	x	-	-	x
CAPILLARIZATION	x	-	x	x

SPECIFIC TREATMENT

PROGRAMS	Mi-SCAN	Mi-ACTION	Mi-RANGE	Optional 2+2
AESTHETIC				
TONING	x	-	-	x
FIRMING	x	-	-	x
SHAPING	x	-	-	x
REFINEMENT	x	-	-	x
ELASTICITY	x	-	x	x

VI LIST OF PROGRAMS - Theta 500

CONDITIONING				
PROGRAMS	Mi-SCAN	Mi-TENS	Mi-RANGE	**Optional 2+2**
SPORT				
POTENTIATION	x	-	-	x
ENDURANCE	x	-	-	x
RESISTANCE	x	-	-	x
STRENGTH	x	-	-	x
EXPLOSIVE STRENGTH	x	-	-	x
HYPERTROPHY	x	-	-	x
REGENERATION	x	-	-	x
LOW BACK REINFORCEMENT	x	-	-	x
CORE STABILIZATION	x	-	-	x
ACTIVE RECOVERY	x	-	x	x
RECOVERY PLUS	x	-	x	x
FITNESS				
MUSCLE BUILDING	x	-	-	x
MUSCLE DEFINITION	x	-	-	x
POWER	x	-	-	x
MASSAGE				
TONING MASSAGE	x	-	x	x
RELAXING MASSAGE	x	-	x	x
REVIVING MASSAGE	x	-	x	x

VI LIST OF PROGRAMS - Theta 500

PROGRAMMING				
CUSTOM PROGRAMS	Mi-SCAN	Mi-TENS	Mi-RANGE	**Optional 2+2**
NMES				
CONT. CONVENTIONAL	-	-	-	x
CONT. MODULATED PW	-	-	-	x
CONT. MODULATED FREQ	-	-	-	x
BURST	-	-	-	x
INTERMITT. CONVENTIONAL	-	-	-	x
INTERMITT. MODULATED FREQ	-	-	-	x
TENS				
CONVENTIONAL	-	-	-	x
BURST	-	-	-	x
MIXED FREQUENCY	-	-	-	x
MODULATED PW	-	-	-	x
MODULATED FREQUENCY	-	-	-	x
2+2 PROGRAMS				
FREQ MODULATED TENS	-	-	-	-
TENS MODULATED PW	-	-	-	-
BURST TENS	-	-	-	-
ENDORPHINIC	-	-	-	-
REINFORCEMENT (SMALLER MUSCLE GROUPS)	-	-	-	-
REINFORCEMENT (LARGER MUSCLE GROUPS)	-	-	-	-
DISUSE ATROPHY (SMALLER MUSCLE GROUPS)	-	-	-	-
DISUSE ATROPHY (LARGER MUSCLE GROUPS)	-	-	-	-